

### **REMARKS/ARGUMENTS**

Applicant appreciates the Examiner's notice regarding the typographical error in the listing of claims. We have appropriately updated the listing of claims to reflect that claims 1-5, 8-12, 18-19, 21-25, and 35 to 45 remain in this application. As a result of the election of species, all claims are directed toward *Pasteurella multocida*. As per 37 CFR 1.141, Applicant will be entitled to consideration of withdrawn claims if the generic claim is allowed.

The Examiner rejected Claims 28 and 43 under 35 USC §112 as being indefinite. Any molecular biologist would understand that an appropriate promoter is one that could be used to alter the expression of a gene. A molecular biologist could look at the genome and select a promoter that would allow for increased expression. Not every promoter could be used, but a person of ordinary skill would know which promoters would be appropriate for that particular use.

The Examiner also rejected claims 1-5, 9-12, 21-25, 35-38 and 41-43 under 35 USC 102(b) as being anticipated by Anderson et al in light of Heithoff et al. Applicant respectfully traverses this rejection because multiple references have been used and also because Anderson does not teach every element of the claims.

Normally, only one reference should be used in making a rejection under 35 USC 102. MPEP §2131.01 provides three circumstances as to when multiple references may be used. Specifically, multiple references can be cited to:

“(A) Prove the primary reference contains an “enabled disclosure;”

- (B) Explain the meaning of a term used in the primary reference; or
- (C) Show that a characteristic not disclosed in the reference is inherent. "

The Heithoff reference has not been used to show that Anderson contains an enabling disclosure, as in above guideline (A). The Heithoff reference also has not been used in this circumstance to explain the meaning of any term in the primary reference as in guideline (B). Finally, the Heithoff reference is not used to show that a characteristic disclosed in Anderson is inherent, as in guideline (C). Rather, the Heithoff reference is being used to suggest that *dam* inhibitors have broad antimicrobial action and *dam* negative derivatives may be used as live attenuated vaccines. This is not an inherent feature that makes the Anderson reference anticipate our claims. Applicant respectfully requests that the rejection be withdrawn as it has been improperly applied.

Furthermore, Anderson does not teach every element of the claims. As a result of the election of species, every claim has been directed toward *Pasteurella multocida*. As shown by our declaration, *dam* activity was not even known to exist in *Pasteurella multocida* until it was discovered by our inventor and published. The declaration of Mark Lawrence is attached and shows that the presence of the *dam* gene in *Pasteurella multocida* was first discovered by our inventors in 1999. The earliest GenBank entry for *P. multocida dam* is August 2003 by Applicant. Because Heithoff and Anderson references were published before the gene was even known to have existed, they cannot have anticipated our claimed invention and certainly could not have had an enabling reference. On this basis, Applicant respectfully requests that the 102(b) rejections be withdrawn.

The Examiner has also rejected Claims 1-5, 8-12, 18-19, 21-25, and 35-45 under 35 USC 102(a) and (e) as anticipated by or, in the alternative, under 35 USC 103(a) as obvious over Mahan et al. Applicant respectfully traverses the rejection.

For a proper 102(a) or 102(e) rejection, the invention had to be known or used by others in the US, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for patent. As discussed above and shown by submitted evidence in the declaration of Mark Lawrence, the presence of the *dam* gene was not even known in *P. multocida* prior to the discovery by the applicant. The claimed invention could not have been known or used by others prior to public knowledge of the existence of the gene, and it was not patented or described in a printed publication. Therefore, the Mahan reference does not anticipate the claimed invention. Furthermore, the assertion that the Mahan reference mentions *P. multocida* is only partially correct. Mahan only refers to it as a possible unmodified pathogenic bacteria and not modified to regulate *dam* expression as claimed.

For a proper 103 (a) rejection, the invention must have been obvious to others of ordinary skill in the art at the time the invention was made. Because the existence of the *dam* gene in Pasteurellacea was unknown prior to the discovery by the inventor, the invention cannot be obvious based on the Mahan reference. There is no indication that Mahan even knew of the existence of the *dam* gene in *P. multocida*, and it is apparent that he was broadly claiming an invention of which he was not in possession at the time of his application. The Mahan reference certainly could not have been enabling.

**CONCLUSION**

In view of the above, it is submitted that the claims and application are in condition for allowance. Reconsideration of the rejections and objections is requested. Allowance of the claims at an early date is solicited. Should the Examiner have any suggestions to place the application in even better condition for allowance or feel that issues may be best resolved by personal or telephonic interview, Applicant invites the Examiner to contact the undersigned representative at the number below.

Respectfully Submitted,  
Butler, Snow, O'Mara, Stevens & Cannada, PLLC

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